.cm \dot`C-M`\ *n*. On the Internet, the major geographic domain specifying that an address is located in Cameroon.

CMI \C`M-I`\ *n*. Acronym for computer-managed instruction. Any type of teaching that uses computers as educational tools. *See also* CAI, CBT.

CMOS \C`mos, C`M-O-S`\ *n*. **1.** Acronym for complementary metal-oxide semiconductor. A semiconductor technology in which pairs of metal-oxide semiconductor field effect transistors (MOSFETs), one N-type and the other P-type, are integrated on a single silicon chip. Generally used for RAM and switching applications, these devices have very high speed and extremely low power consumption. They are, however, easily damaged by static electricity. *See also* MOSFET, N-type semiconductor, P-type semiconductor. **2.** The battery-backed memory (presumably made with complementary metal-oxide semiconductor technology) used to store parameter values needed to boot IBM Personal Computers and compatibles, such as the type of disks and the amount of memory, as well as the clock/calendar time.

CMOS RAM \C`mos ram´, C`M-O-S`, R-A-M`\ *n*. Random access memory made using complementary metal-oxide semiconductor technology. CMOS chips consume extremely little power and have high tolerance for noise from the power supply. These characteristics make CMOS chips, including CMOS RAM chips, very useful in hardware components that are powered by batteries, such as most microcomputer clocks and certain types of scratchpad RAM that are maintained by the operating system. *See also* CMOS (definition 1), parameter RAM, RAM.

CMOS setup \C`mos set´up, C`M-O-S`\ *n*. A system configuration utility, accessible at boot time, for setting up certain system options, such as the date and time, the kind of drives installed, and port configuration. *See also* CMOS (definition 2).

CMS \C`M-S`\ *n*. *See* color management system.

CMY \C`M-Y`\ *n*. Acronym for cyan-magenta-yellow. A model for describing colors that are produced by absorbing light, as by ink on paper, rather than by emitting light, as on a video monitor. The three kinds of cone cells in the eye respond to red, green, and blue light, which are absorbed (removed from white light) by cyan, magenta, and yellow pigments, respectively. Percentages of pigments in these subtractive primary colors can therefore be mixed to get the appearance of any desired color. Absence of any pigment leaves white unchanged; adding 100 percent of all three pigments turns white to black. *Compare* CMYK, RGB.

CMYK \C`M-Y-K`\ *n*. Acronym for cyan-magenta-yellow-black. A color model that is similar to the CMY color model but produces black with a separate black component rather than by adding 100 percent of cyan, magenta, and yellow. *See also* CMY.

.cn \dot`C-N`\ *n*. On the Internet, the major geographic domain specifying that an address is located in China.

.co \dot`C-O`\ *n*. On the Internet, the major geographic domain specifying that an address is located in Colombia.

coaxial cable \kō-aks`ē-əl kā`bl\ *n*. A two-conductor cable consisting of a center wire inside a grounded cylindrical shield, typically made of braided wire, that is insulated from the center wire. The shield prevents signals transmitted on the center wire from affecting nearby components and prevents external interference from affecting the signal carried on the center wire. See the illustration.

Braided shield   Insulating material

Central wire   Outer insulating sheath
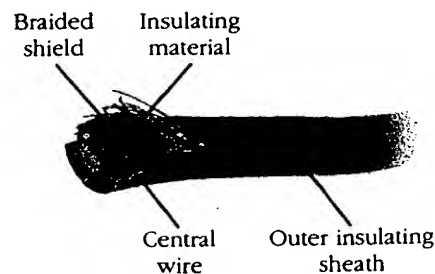
Coaxial cable.

COBOL \kō`bol, C`O-B`O-L`\ *n*. Acronym for Common Business-Oriented Language. A verbose, English-like compiled programming language developed between 1959 and 1961 and still in widespread use today, especially in business applications typically run on mainframes. A COBOL program consists of an Identification Division, which specifies the name of the program and contains any other documentation the programmer

EXHIBIT ____ C ____ PAGE __1__ OF _18_

wants to add; an Environment Division, which specifies the computer(s) being used and the files used in the program for input and output; a Data Division, which describes the format of the data structures used in the program; and a Procedure Division, which contains the procedures that dictate the actions of the program. *See also* compiled language.

cobweb site \kob´web sīt`\ *n.* A Web site that is far out of date. *See also* Web site.

CODASYL \kō´ də-sil`, C`O-D`A-S`Y-L`\ *n.* Acronym for **C**onference on **D**ata **S**ystems **L**anguages. An organization founded by the U.S. Department of Defense. CODASYL is dedicated to the development of data-management systems and languages, among them the widely used COBOL business language.

code[1] \kōd\ *n.* **1.** Program instructions. Source code consists of human-readable statements written by a programmer in a programming language. Machine code consists of numerical instructions that the computer can recognize and execute and that were converted from source code. *See also* data, program. **2.** A system of symbols used to convert information from one form to another. A code for converting information in order to conceal it is often called a *cipher*. **3.** One of a set of symbols used to represent information.

code[2] \kōd\ *vb.* To write program instructions in a programming language. *See also* program.

codec \kō´dek\ *n.* **1.** Short for **coder/decoder.** Hardware that can convert audio or video signals between analog and digital forms. **2.** Short for **compressor/decompressor.** Hardware or software that can compress and uncompress audio or video data. *See also* compress[2], uncompress. **3.** Hardware that combines the functions of definitions 1 and 2.

code conversion \kōd´ kən-vər`zhən\ *n.* **1.** The process of translating program instructions from one form into another. Code may be converted at the source-language level (for example, from C to Pascal), at the hardware-platform level (for example, from working on the IBM PC to working on the Apple Macintosh), or at the language level (for example, from source code in C to machine code). *See also* code[1] (definition 1). **2.** The process of transforming data from one representation to

another, such as from ASCII to EBCDIC or from two's complement to binary-coded decimal.

Code Division Multiple Access \kōd də-vizh`ən mul`tə-pl ak´ses\ *n.* A form of multiplexing in which the transmitter encodes the signal, using a pseudo-random sequence that the receiver also knows and can use to decode the received signal. Each different random sequence corresponds to a different communication channel. Motorola uses Code Division Multiple Access for digital cellular phones. *Acronym:* CDMA (C`D-M-A`). *Also called* spread spectrum. *See also* multiplexing, transmitter.

code page \kōd´ pāj\ *n.* In MS-DOS versions 3.3 and later, a table that relates the binary character codes used by a program to keys on the keyboard or to the appearance of characters on the display. Code pages are a means of providing support for character sets and keyboard layouts used in different countries. Devices such as the display and the keyboard can be configured to use a specific code page and to switch from one code page (such as United States) to another (such as Portugal) at the user's request.

coder \kō´dər\ *n. See* programmer.

code segment \kōd´ seg`mənt\ *n.* **1.** A memory segment containing program instructions. **2.** A named and segregated portion of a program's code typically performing a specific class of operations. Code segments in this sense are often loaded into memory as memory segments. The main program segment is kept in memory, and auxiliary segments are loaded only when they are required.

code snippet \kōd´ snip`ət\ *n.* **1.** In a graphical user interface, programming instructions embedded in a menu option or button defined by the user. The snippet—consisting of one or more lines of source code—determines what the option or button does when chosen or clicked on. **2.** A small piece of programming code that is part of a larger program. Usually the code snippet performs a specific function or task.

coding form \kō´dēng fôrm`\ *n.* A sheet of paper ruled with horizontal and vertical lines to aid in writing source code for older languages that have position-dependent syntax (such as FORTRAN). Most programmers now use graph paper if they use paper at all.

be created and destroyed as required. *See also* allocate, deallocate. *Compare* static allocation.

dynamic binding \dī-nam`ik bīn`dēng\ *n*. Binding (converting symbolic addresses in the program to storage-related addresses) that occurs during program execution. The term often refers to object-oriented applications that determine, during run time, which software routines to call for particular data objects. *Also called* late binding. *Compare* static binding.

dynamic caching \dī-nam`ik kash`ēng\ *n*. A technique for storing recently used data in memory where cache size is based on how much memory is available rather than how much memory is assigned to the application currently running.

Dynamic Data Exchange \dī-nam`ik dā`tə ekschānj`, dat`ə\ *n*. *See* DDE.

dynamic dump \dī-nam`ik dump`\ *n*. A listing, either stored on disk or sent to a printer, of memory contents generated at the time of a break in the execution of a program—a useful tool for programmers interested in knowing what is happening at a certain point in the execution of a program.

Dynamic Host Configuration Protocol \dī-nam`ik hōst` kən-fi-gyər-ā`shən prō`tə-kol\ *n*. *See* DHCP.

dynamic keys \dī-nam`ik kēz`\ *n*. An encryption technique in which messages are encrypted differently for each transmission based on different keys so that if a key is captured and decrypted, it would never be useful again. *See also* encryption, key (definition 3).

dynamic-link library \dī-nam`ik-lēnk` lī`brâr-ē\ *n*. A feature of the Microsoft Windows family of operating systems and OS/2 that allows executable routines to be stored separately as files with DLL extensions and to be loaded only when needed by a program. A dynamic-link library has several advantages. First, it does not consume any memory until it is used. Second, because a dynamic-link library is a separate file, a programmer can make corrections or improvements to only that module without affecting the operation of the calling program or any other dynamic-link library. Finally, a programmer can use the same dynamic-link library with other programs. *Acronym:* DLL (D`L-L`).

dynamic memory allocation \dī-nam`ik mem`ər-ē al-ə-kā`shən\ *n*. The allocation of memory to a process or program at run time. Dynamic memory is allocated from the system heap by the operating system upon request from the program.

dynamic page \dī-nam`ik pāj`\ *n*. An HTML document that contains animated GIFs, Java applets, or ActiveX controls. *See also* ActiveX controls. GIF, HTML, Java applet.

dynamic RAM \dī-nam`ik ram`, R-A-M`\ *n*. A form of semiconductor random access memory (RAM). Dynamic RAMs store information in integrated circuits containing capacitors. Because capacitors lose their charge over time, dynamic RAM boards must include logic to refresh (recharge) the RAM chips continuously. While a dynamic RAM is being refreshed, it cannot be read by the processor; if the processor must read the RAM while it is being refreshed, one or more wait states occur. Despite being slower, dynamic RAMs are more commonly used than RAMs because their circuitry is simpler and because they can hold up to four times as much data. *Acronym:* DRAM (dram, D`ram). *See also* RAM. *Compare* static RAM.

dynamic random access memory \dī-nam`ik ran`dəm ak-ses mem`ər-ē\ *n*. *See* dynamic RAM.

dynamic relocation \dī-nam`ik rē-lō-kā`shən\ *n*. The relocation in memory of data or of the code of a currently running program by an internal system routine. Dynamic relocation helps a computer use memory efficiently.

dynamic scheduling \dī-nam`ik skej`ə-lēng\ *n*. The management of concurrently running processes (programs), usually by the operating system.

dynamic SLIP \dī-nam`ik slip`, S`L-I-P`\ *n*. Short for **dynamic** Serial Line Internet Protocol. Internet access under SLIP in which the user's IP address is not permanent but is reassigned from a pool each time the user connects. The number of IP addresses an Internet service provider needs to offer is reduced to the number of connections that can be in use at once, rather than the total number of subscribers. *See also* IP address, ISP, SLIP.

dynamic storage \dī-nam`ik stōr`əj\ *n*. **1.** Information storage systems whose contents will be lost if power is removed from the system. RAM (random access memory) systems are the most

is the U.S. Army phrase FUBAR (an acronym which, in discreet language, represents Fouled Up Beyond All Recognition/Repair). However, other origins have been claimed. *Compare* fred (definition 2).

footer \fŏŏt´ər\ *n*. One or more identifying lines printed at the bottom of a page. A footer may contain a folio (page number), a date, the author's name, and the document title. *Also called* running foot. *Compare* header (definition 1).

footprint \fŏŏt´print\ *n*. The surface area occupied by a personal computer or other device.

force \fōrs\ *vb*. In programming, to perform a particular action that would normally not occur. The term is most often used in the context of forcing data to be within a particular range of values—for example, forcing a divisor to be nonzero. *See also* cast.

foreground[1] \fōr´ground\ *adj*. Currently having control of the system and responding to commands issued by the user. *See also* multitasking. *Compare* background[1].

foreground[2] \fōr´ground\ *n*. **1.** The color of displayed characters and graphics. *Compare* background[2] (definition 1). **2.** The condition of the program or document currently in control and affected by commands and data entry in a windowing environment. *Compare* background[2] (definition 4).

fork[1] \fōrk\ *n*. One of the two parts of a file recognized by the Mac OS. A Macintosh file has a data fork and a resource fork. Most or all of a typical user-produced document is in the data fork; the resource fork usually contains application-oriented information, such as fonts, dialog boxes, and menus. *See also* data fork, resource fork.

fork[2] \fōrk\ *vb*. To initiate a child process in a multitasking system after a parent process has been started. *See also* multitasking.

FOR loop \fōr´ lŏŏp\ *n*. A control statement that executes a section of code a specified number of times. Actual syntax and usage vary from language to language. In most cases, the value of an index variable moves through a range of values, being assigned a different (and usually consecutive) value each time the program moves through the section of code. *See also* iterative statement, loop[1] (definition 1). *Compare* DO loop.

form \fōrm\ *n*. **1.** A structured document with spaces reserved for entering information and often containing special coding as well. **2.** In some applications (especially databases), a structured window, box, or other self-contained presentation element with predefined areas for entering or changing information. A form is a visual "filter" for the underlying data it is presenting, generally offering the advantages of better data organization and greater ease of viewing. **3.** In optical media, a data storage format used in compact disc technology. **4.** In programming, a metalanguage (such as Backus-Naur form) used to describe the syntax of a language. *See also* Backus-Naur form.

formal language \fōr´məl lang´wəj\ *n*. A combination of syntax and semantics that completely defines a computer language. *See also* Backus-Naur form, semantics (definition 1), syntax.

formal logic \fōr´məl loj´ik\ *n*. A study of the logical expressions, sequences, and overall construction of a valid argument, without regard to the truth of the argument. Formal logic is used in proving program correctness.

format[1] \fōr´mat\ *n*. **1.** In general, the structure or appearance of a unit of data. **2.** The arrangement of data within a document file that typically permits the document to be read or written by a certain application. Many applications can store a file in a more generic format, such as plain ASCII text. **3.** The layout of data storage areas (tracks and sectors) on a disk. **4.** The order and types of fields in a database. **5.** The attributes of a cell in a spreadsheet, such as its being alphabetic or numeric, the number of digits, the use of commas, and the use of currency signs. **6.** The specifications for the placement of text on a page or in a paragraph.

format[2] \fōr´mat\ *vb*. **1.** To change the appearance of selected text or the contents of a selected cell in a spreadsheet. **2.** To prepare a disk for use by organizing its storage space into a collection of data "compartments," each of which can be located by the operating system so that data can be sorted and retrieved. When a previously used disk is formatted, any preexisting information on it is lost.

format bar \fōr´mat bär´\ *n*. A toolbar within an application used for modifying the format of the

hyperlink \hī´pər-lēnk`\ *n.* A connection between an element in a hypertext document, such as a word, phrase, symbol, or image, and a different element in the document, another hypertext document, a file, or a script. The user activates the link by clicking on the linked element, which is usually underlined or in a color different from the rest of the document to indicate that the element is linked. Hyperlinks are indicated in a hypertext document through tags in markup languages such as SGML and HTML. These tags are generally not visible to the user. *Also called* hot link, hypertext link. *See also* anchor (definition 2), HTML, hypermedia, hypertext, URL.

hypermedia \hī´pər-mē`dē-ə\ *n.* The integration of any combination of text, graphics, sound, and video into a primarily associative system of information storage and retrieval in which users jump from subject to related subject in searching for information. Hypermedia attempts to offer a working and learning environment that parallels human thinking—that is, one in which the user can make associations between topics, rather than move sequentially from one to the next, as in an alphabetic list. For example, a hypermedia presentation on navigation might include links to astronomy, bird migration, geography, satellites, and radar. If the information is primarily in text form, it is regarded as hypertext; if video, music, animation, or other elements are included, the information is regarded as hypermedia. *See also* hypertext.

hyperspace \hī´pər-spās`\ *n.* The set of all documents that can be accessed by following hyperlinks in the World Wide Web. *Compare* cyber-space (definition 2), Gopherspace.

HyperTalk \hī´pər-täk\ *n.* The programming language used to manipulate HyperCard stacks. *See also* HyperCard.

hypertext \hī´pər-tekst\ *n.* Text linked together in a complex, nonsequential web of associations in which the user can browse through related topics. For example, in an article with the word *iron,* traveling among the links to *iron* might lead the user to the periodic table of the elements or a map of the migration of metallurgy in Iron Age Europe. The term *hypertext* was coined in 1965 to describe documents presented by a computer that express the nonlinear structure of ideas as opposed to the linear format of books, film, and speech. The term *hypermedia,* more recently introduced, is nearly synonymous but emphasizes the nontextual element, such as animation, recorded sound, and video. *See also* HyperCard, hypermedia.

hypertext link \hī´pər-tekst lēnk`\ *n. See* hyperlink.

Hypertext Markup Language \hī`pər-tekst märk´up lang`wəj\ *n. See* HTML.

Hypertext Transfer Protocol \hī`pər-tekst trans´fər prō`tə-kol\ *n. See* HTTP.

Hypertext Transfer Protocol Daemon \hī`pər-tekst trans`fər prō´tə-kol dē`mən\ *n. See* HTTPd.

Hypertext Transfer Protocol Next Generation \hī`pər-tekst trans`fər prō`tə-kol nekst` jen-ər-ā´shən\ *n. See* HTTP-NG.

HyperWave \hī´pər-wāv`\ *n.* A World Wide Web server that specializes in database manipulation and multimedia.

hyphen \hī´fən\ *n.* A punctuation mark (-) used to break a word between syllables at the end of a line or to separate the parts of a compound word. Word processing programs with sophisticated hyphenation capabilities recognize three types of hyphens: normal, optional, and nonbreaking. Normal hyphens, also called *required* or *hard hyphens,* are part of a word's spelling and are always visible, as in *long-term.* Optional hyphens, also called *discretionary* or *soft hyphens,* appear only when a word is broken between syllables at the end of a line; they are usually supplied by the word processing program itself. Nonbreaking hyphens are always visible, like normal hyphens, but they do not allow a line break. *See also* hyphenation program.

hyphenation program \hī-fə-nā´shən prō`gram\ *n.* A program (often included as part of a word processing application) that introduces optional hyphens at line breaks. A good hyphenation program will avoid ending more than three lines in a row with hyphens and will prompt the user for confirmation or tag ambiguous breaks, as in the word *desert* (did the army de-sert in the des-ert?). *See also* hyphen.

hysteresis \hi`stər-ē´sis\ *n.* The tendency of a system, a device, or a circuit to behave differently

storage device. Bits per inch is one measure of packing density.

PackIT \pak´it\ *n*. A file format used on the Apple Macintosh to represent collections of Mac files, possibly Huffman compressed. *See also* Huffman coding, Macintosh.

PAD \P`A-D´\ *n*. See packet assembler/disassembler.

pad character \pad´ kâr`ək-tər\ *n*. In data input and storage, an extra character inserted as filler to use up surplus space in a predefined block of a specified length, such as a fixed-length field.

padding \pad´ēng\ *n*. In data storage, the addition of one or more bits, usually zeros, to a block of data in order to fill it, to force the actual data bits into a certain position, or to prevent the data from duplicating a bit pattern that has an established meaning, such as an embedded command.

paddle \pad´l\ *n*. An early type of input device often used with computer games especially for side-to-side or up-and-down movements of an on-screen object. A paddle is less sophisticated than a joystick because it only permits the user, by turning a dial, to specify movement along a single axis. The paddle got its name because its most popular use was to control the on-screen paddles in the simple early video games, such as Pong. See the illustration.
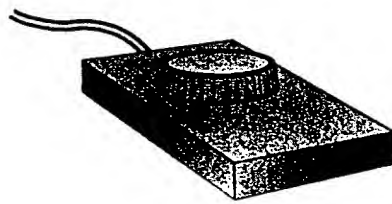
Paddle.

paddle switch \pad´l swich`\ *n*. Any switch that has a wide handle. The large on/off switch on many IBM personal computers is one type of paddle switch. See the illustration.

page \pāj\ *n*. **1.** In word processing, the text and display elements to be printed on one side of a sheet of paper, subject to formatting specifications such as depth, margin size, and number of columns. **2.** A fixed-size block of memory. When used in the context of a paging memory system, a

Paddle switch.

page is a block of memory whose physical address can be changed via mapping hardware. *See also* EMS, memory management unit, virtual memory. **3.** In computer graphics, a portion of display memory that contains one complete full-screen image; the internal representation of a screenful of information.

page break \pāj´ brāk\ *n*. The point at which the flow of text in a document moves to the top of a new page. Most word processors automatically place page breaks when the material on the page reaches a specified maximum. By contrast, a "hard" or "manual" page break is a command or code inserted by the user to force a page break at a specific place in the text. *See also* form feed.

paged address \pājd´ a´dres, ə-dres´\ *n*. In the 80386, i486, and Pentium paged-memory architecture, an address in memory created by combining the processes of segment translation and page translation. In the paged-memory scheme, which requires that the microprocessor's paging feature be enabled, logical addresses are transformed into physical addresses in two steps: segment translation and page translation. The first step, segment translation, converts a logical to a linear address—an address that refers indirectly to a physical address. After the linear address is obtained, the microprocessor's paging hardware converts the linear address to a physical address by specifying a page table (an array of 32-bit page specifiers), a page (a 4-KB unit of contiguous addresses within physical memory) within that table, and an offset within that page. This information collectively refers to a physical address.

page-description language \pāj-də-skrip´shən lang´wəj\ *n*. A programming language, such as PostScript, that is used to describe output to a printer or a display device, which then uses the

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query \kwēr´ē, kwâr´ē\ *n.* **1.** The process of extracting data from a database and presenting it for use. **2.** A specific set of instructions for extracting particular data repetitively.

query by example \kwēr´ē bī ig-zam´pl, kwâr´ē\ *n.* A simple-to-use query language implemented on several relational database management systems. Using query by example, the user specifies fields to be displayed, intertable linkages, and retrieval criteria directly onto forms displayed on the screen. These forms are a direct pictorial representation of the table and row structures that make up the database. Thus, the construction of a query becomes a simple "checkoff" procedure from the viewpoint of the user. *Acronym:* QBE (Q`B-E´).

query language \kwēr´ē lang`wəj, kwâr´ē\ *n.* A subset of the data manipulation language; specifically, that portion relating to the retrieval and display of data from a database. It is sometimes used loosely to refer to the entire data manipulation language. *See also* data manipulation language.

question mark \kwes´chən märk`\ *n.* In some operating systems and applications, a wildcard character often used to represent any other single character. The question mark is one of two wildcard characters supported by the MS-DOS, Windows NT, and OS/2 operating systems. *See also* asterisk.

queue \kyo͞o\ *n.* A multi-element data structure from which (by strict definition) elements can be removed only in the same order in which they were inserted; that is, it follows a first in, first out (FIFO) constraint. There are also several types of queues in which removal is based on factors other than order of insertion—for example, some priority value assigned to each element. *See also* deque, element (definition 1). *Compare* stack.

queued access method \kyo͞od ak´ses meth`əd\ *n.* A programming technique that minimizes input/output delays by synchronizing the transfer of information between the program and the computer's input and output devices. *Acronym:* QAM (Q`A-M´, kwäm).

QuickDraw \kwik´drä, drô\ *n.* On the Apple Macintosh, the built-in group of routines within the operating system that control the display of graphics and text. Application programs call QuickDraw for on-screen displays. *See also* Toolbox.

QuickDraw 3-D \kwik`drä thrē-D´, kwik`drô\ *n.* A version of the Macintosh QuickDraw library that includes routines for doing 3-D graphics calculations. *See also* QuickDraw.

quicksort \kwik´sôrt\ *n.* An efficient sort algorithm, described by C.A.R. Hoare in 1962, in which the essential strategy is to "divide and conquer." A quicksort begins by scanning the list to be sorted for a median value. This value, called the *pivot*, is then moved to its final position in the list. Next, all items in the list whose values are less than the pivot value are moved to one side of the list, and the items with values greater than the pivot value are moved to the other side. Each resulting side is sorted the same way, until a fully sorted list results. *See also* sort algorithm. *Compare* bubble sort, insertion sort, merge sort.

QuickTime \kwik´tīm\ *n.* The multimedia extensions to the Apple Macintosh System 7 software, also available for Windows. QuickTime can synchronize up to 32 tracks of sounds, video images, or MIDI or other control output.

Quick Viewers \kwik´ vyo͞o`ərz\ *n.* A set of file viewers supplied with Windows 95.

quit[1] \kwit\ *n.* **1.** An FTP command that instructs the server to drop the current connection with the client from which it received the command. **2.** A command in many applications for exiting the program.

quit[2] \kwit\ *vb.* **1.** To stop in an orderly manner. **2.** To execute the normal shutdown of a program and return control to the operating system. *Compare* abort, bomb[2], crash[2] (definition 1), hang.

QWERTY keyboard \kwer´tē kē`bôrd\ *n.* A keyboard layout named for the six leftmost characters in the top row of alphabetic characters on most keyboards—the standard layout of most typewriters and computer keyboards. *Compare* Dvorak keyboard, ergonomic keyboard.

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replaces most of the text-based .ini files used in Windows 3.*x* and MS-DOS configuration files, such as AUTOEXEC.BAT and CONFIG.SYS. Although the Windows 95 Registry is similar to the one in Windows NT, there are some differences, such as how they are stored on disk. *Also called* System Registry. *See also* hierarchical database, .ini, input/output port, property sheet, Registry Editor.

Registry Editor \rej´is-trē ed`i-tər\ *n.* An application under Windows 95 that allows the user to edit the entries in the Registry. See the illustration. *Acronym:* REGEDIT (rej´ed`it). *See also* Registry.
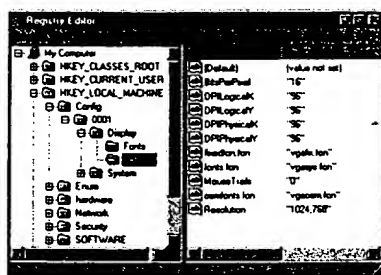
Registry Editor.

regression analysis \ri-gresh´ən ə-nal´ə-sis\ *n.* In statistics, an analysis of the degree to which variations in an independent variable affect a dependent variable (a variable whose value depends on the value of another variable). *See also* multiple regression.

regression testing \ri-gresh´ən te`stēng\ *n.* Complete retesting of a modified program, rather than a test of only the modified routines, to ensure that no errors have been introduced with the modifications.

relation \rə-lā´shən\ *n.* A structure composed of attributes (individual characteristics, such as name or address, corresponding to the columns in a table) and tuples (sets of attribute values describing particular entities, such as customers, corresponding to the rows in a table). Within a relation, tuples cannot be repeated; each must be unique. Further, tuples are unordered within a relation; interchanging two tuples does not change the relation. Finally, if relational theory is to be applicable,

the domain of each attribute must be atomic—that is, a simple value, rather than a structure such as an array or a record. A relation in which the domains of all attributes are atomic is said to be normalized or in first normal form. *See also* normal form (definition 1).

relational algebra \rə-lā´shən-əl al´jə-brə\ *n.* A collection of rules and operators that permit relations (tables) to be manipulated. Relational algebra is usually described as having the following operators: SELECT, PROJECT, PRODUCT, UNION, INTERSECT, DIFFERENCE, JOIN (or INNER JOIN), and DIVIDE. In a relational database, relational algebra is used to develop procedures to build new relations based on the existing relations.

relational calculus \rə-lā´shən-əl kal´kyə-lus\ *n.* In database management, a nonprocedural method for manipulating relations (tables). There are two families of relational calculus: domain calculus and tuple calculus. The two families of relational calculus are mathematically equivalent to each other and to relational algebra. Using either family, one can formulate a description of a desired relation, based on the existing relations in the database.

relational database \rə-lā´shən-əl dā´tə-bās\ *n.* A database or database management system that stores information in tables—rows and columns of data—and conducts searches by using data in specified columns of one table to find additional data in another table. In a relational database, the rows of a table represent records (collections of information about separate items) and the columns represent fields (particular attributes of a record). In conducting searches, a relational database matches information from a field in one table with information in a corresponding field of another table to produce a third table that combines requested data from both tables. For example, if one table contains the fields EMPLOYEE-ID, LAST-NAME, FIRST-NAME, and HIRE-DATE, and another contains the fields DEPT, EMPLOYEE-ID, and SALARY, a relational database can match the EMPLOYEE-ID fields in the two tables to find such information as the names of all employees earning a certain salary or the departments of all employees hired after a certain date. In other words, a

for temporary data storage. *Also called* scratchpad, scratchpad memory. *See also* central processing unit, register.

screen angle \skrēn´ ang`l\ *n.* The angle at which the dots in a halftone screen are printed. A correct angle will minimize blur and other undesirable effects, such as moiré patterns. *See also* color separation (definition 1), halftone, moiré.

screen buffer \skrēn´ buf`ər\ *n. See* video buffer.

screen dump \skrēn´ dump\ *n.* A duplicate of a screen image; essentially, a "snapshot" of the screen that is either sent to a printer or saved as a file.

screen flicker \skrēn´ flik`ər\ *n. See* flicker.

screen font \skrēn´ font\ *n.* A typeface designed for display on a computer monitor screen. Screen fonts often have accompanying PostScript fonts for printing to PostScript-compatible printers. *See also* derived font, intrinsic font. *Compare* PostScript font, printer font.

screen frequency \skrēn´ frē`kwən-sē\ *n. See* halftone.

**screen grabber** \skrēn´ grab`ər\ *n. See* grabber (definition 3).

screen name \skrēn´ nām\ *n.* A name under which an America Online user is known. The screen name may be the same as the user's real name. *See also* America Online.

screen phone \skrēn´ fōn\ *n.* A type of Internet appliance combining a telephone with an LCD display screen, a digital fax modem, and a computer keyboard, with ports for a mouse, printer, and other peripheral devices. Screen phones can be used as regular telephones for voice communications and can also be used as terminals to gain access to the Internet and other online services.

screen pitch \skrēn´ pich\ *n.* A measurement of a computer monitor's screen density, representing the distance between phosphors on the display. The lower the number, the more detail can be displayed clearly. For example, a .28-dot-pitch screen has better resolution than one with .32. See the illustration. *See also* phosphor.

screen saver \skrēn´ sā`vər\ *n.* A utility that causes a monitor to blank out or display a certain image after a specified amount of time passes without the keyboard being touched or the mouse being moved. Touching a key or moving the
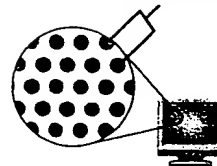

Screen pitch.

mouse deactivates the screen saver. Screen savers were originally used to prevent images from becoming permanently etched on a monitor's screen. Although modern monitors are not susceptible to this problem, screen savers remain popular for their decorative and entertainment value. See the illustration.
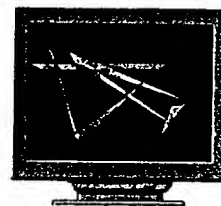
Screen saver.

screen shot \skrēn´ shot\ *n.* An image that shows all or part of a computer display. The illustration shown here as well as the illustrations in this dictionary for the entries *alert box, cell,* and *menu bar,* for example, are screen shots.
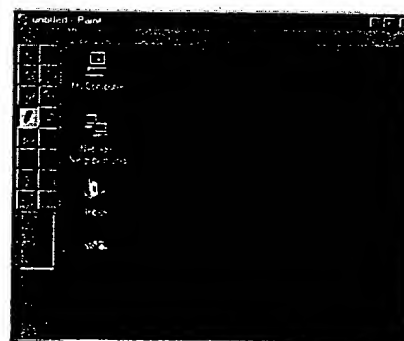
Screen shot.

script \skript\ *n.* A program consisting of a set of instructions to an application or utility program.

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The instructions usually use the rules and syntax of the application or utility. *See also* macro.

scripting language \skrip´tĕng lang`wəj\ *n*. A simple programming language designed to perform special or limited tasks, sometimes associated with a particular application or function. An example of a scripting language is Perl. *See also* Perl, script.

scroll \skrōl\ *vb*. To move a document or other data in a window in order to view a particular portion of the document. Scrolling may be controlled by the mouse, arrow keys, or other keys on the keyboard. *See also* scroll bar.

scroll arrow \skrōl´ âr`ō\ *n. See* scroll bar.

scroll bar \skrōl´ bär\ *n*. In some graphical user interfaces, a vertical or horizontal bar at the side or bottom of a display area that can be used with a mouse for moving around in that area. Scroll bars often have four active areas: two scroll arrows for moving line by line, a sliding scroll box for moving to an arbitrary location in the display area, and gray areas for moving in increments of one window at a time. See the illustration.

scroll box \skrōl´ boks\ *n. See* elevator.

Scroll Lock key \skrōl´ lok kē`\ *n*. On the IBM PC/XT and AT and compatible keyboards, a key on the top row of the numeric keypad that controls the effect of the cursor control keys and sometimes prevents the screen from scrolling. On the enhanced and Macintosh keyboards, this key is to the right of the function keys on the top row. Many modern applications ignore the Scroll Lock setting.

SCSI \skuz´ē, S`C-S-I´\ *n*. Acronym for Small Computer System Interface, a standard high-speed parallel interface defined by the X3T9.2 committee of the American National Standards Institute (ANSI).

A SCSI interface is used to connect microcomputers to SCSI peripheral devices, such as many hard disks and printers, and to other computers and local area networks. *Compare* ESDI, IDE.

SCSI-1 \skuz`ē-wən´, S-C-S-I`wən´\ *n. See* SCSI.

SCSI-2 \skuz`ē-to͞o´, S-C-S-I´-to͞o´\ *n*. An enhanced ANSI standard for SCSI (Small Computer System Interface) buses. Compared with the original SCSI standard (now called SCSI-1), which can transfer data 8 bits at a time at up to 5 MB per second, SCSI-2 offers increased data width, increased speed, or both. A SCSI-2 disk drive or host adapter can work with SCSI-1 equipment at the older equipment's maximum speed. *See also* Fast SCSI, Fast/Wide SCSI, SCSI, Wide SCSI. *Compare* UltraSCSI.

SCSI bus \skuz´ē bus, S`C-S-I´\ *n*. A parallel bus that carries data and control signals from SCSI devices to a SCSI controller. *See also* bus, controller, SCSI device.

SCSI chain \skuz´ē chān`, S`C-S-I´\ *n*. A set of devices on a SCSI bus. Each device (except the host adapter and the last device) is connected to two other devices by two cables, forming a daisy chain. *See also* daisy chain, SCSI.

SCSI connector \skuz´ē kə-nek`tər, S`C-S-I´\ *n*. A cable connector used to connect a SCSI device to a SCSI bus. See the illustration on the next page. *See also* bus, connector (definition 1), SCSI device.

SCSI device \skuz´ē də-vīs`, S`C-S-I´\ *n*. A peripheral device that uses the SCSI standard to exchange data and control signals with a computer's CPU. *See also* peripheral, SCSI.

SCSI ID \skuz´ē I-D´ S-C-S-I´\ *n*. The unique identity of a SCSI device. Each device connected to a SCSI bus must have a different SCSI ID. A maxi-
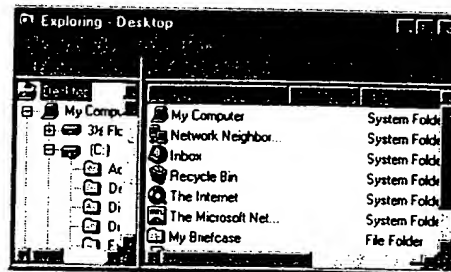
Scroll bar.

SCSI connector.

mum of eight SCSI IDs can be used on the same SCSI bus. *See also* bus, SCSI device.

SCSI network \skuz´ē net`wərk, S`C-S-I´\ *n.* A set of devices on a SCSI bus, which acts like a local area network. *See also* SCSI.

SCSI port \skuz´ē pōrt`, S`C-S-I´\ *n.* **1.** A SCSI host adapter within a computer, which provides a logical connection between the computer and all of the devices on the SCSI bus. *See also* SCSI. **2.** A connector on a device for a SCSI bus cable. *See also* SCSI.

scuzzy \skuz´ē\ *n. See* SCSI.

.sd \dot`S-D´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Sudan.

SDK \S`D-K´\ *n.* Acronym for software developer's kit. *See* developer's toolkit.

SDLC \S`D-L-C´\ *n.* Acronym for Synchronous Data Link Control, the data transmission protocol most widely used by networks conforming to IBM's Systems Network Architecture (SNA). SDLC is similar to the HDLC (High-level Data Link Control) protocol developed by the International Organization for Standardization (ISO). *See also* HDLC.

SDM \S`D-M´\ *n. See* space-division multiplexing.

SDRAM \S`D´ram, S`D-R-A-M´\ *n. See* synchronous DRAM.

SDSL \S`D-S-L´\ *n. See* symmetric digital subscriber line.

.se \dot`S-E´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Sweden.

.sea \dot`S-E-A´\ *n.* A file extension for a self-extracting Macintosh archive compressed with StuffIt. *See also* self-extracting archive.

seamless integration \sēm`ləs in-tə-grā´shən\ *n.* The favorable result that occurs when a new hardware component or program blends smoothly into the overall operation of the system. It is usually the result of thoughtful design and programming.

search[1] \sərch\ *n.* The process of seeking a particular file or specific data. A search is carried out by a program through comparison or calculation to determine whether a match to some pattern exists or whether some other criteria have been met. *See also* binary search, hash search, linear search, search and replace, wildcard character.

search[2] \sərch\ *vb.* **1.** To look for the location of a file. **2.** To seek specific data within a file or data structure. *See also* replace.

search algorithm \sərch´ al`gər-idh-əm\ *n.* An algorithm designed to locate a certain element, called the target, in a data structure. *See also* algorithm, binary search, hash search, linear search.

search and replace \sərch` ənd rə-plās´\ *n.* A common process in applications such as word processors in which the user specifies two strings of characters. The process finds instances of the first string and replaces them with the second string.

search criteria \sərch´ krī-tēr´ē-ə\ *n.* The terms or conditions that a search engine uses to find items in a database. *See also* search engine.

search engine \sərch´ en`jən\ *n.* **1.** A program that searches for key words in documents or in a database. **2.** On the Internet, a program that searches for keywords in files and documents found on the World Wide Web, newsgroups, Gopher menus, and FTP archives. Some search engines are used for a single Internet site, such as a dedicated search engine for a Web site. Others search across many sites, using such agents as spiders to gather lists of available files and documents and store these lists in databases that users can search by keyword. Examples of the latter type of search engine are Lycos, AliWeb, and Excite. Most search engines reside on a server. *See also* agent (definition 2), FTP, Gopher, newsgroup, spider, World Wide Web.

search key \sərch´ kē\ *n.* **1.** The particular field (or column) of the records to be searched in a

database. *See also* primary key, secondary key.
2. The value that is to be searched for in a document or any collection of data.

search string \sərch´ strēng\ *n.* The string of characters to be matched in a search—typically (but not necessarily) a text string.

seat[1] \sēt\ *n.* One workstation or computer, in the context of software licensing on a per-seat basis. *See also* license agreement, workstation (definition 1).

seat[2] \sēt\ *vb.* To insert a piece of hardware fully and position it correctly in a computer or affiliated equipment, as in seating a single inline memory module (SIMM) in its socket.

secondary channel \sek`ən-dâr-ē chan´əl\ *n.* A transmission channel in a communications system that carries testing and diagnostic information rather than actual data. *Compare* primary channel.

secondary key \sek´ən-dâr-ē kē`\ *n.* A field that is to be sorted or searched within a subset of the records having identical primary key values. *See also* alternate key (definition 1), candidate key. *Compare* primary key.

secondary service provider \sek´ən-dâr-ē sər´-vis prə-vī`dər\ *n.* An Internet service provider that provides a Web presence but not direct connectivity. *See also* ISP.

secondary storage \sek`ən-dâr`ē stōr´əj\ *n.* Any data storage medium other than a computer's random access memory (RAM)—typically tape or disk. *Compare* primary storage.

second normal form \sek`ənd nōr´məl fōrm`\ *n.* *See* normal form (definition 1).

secret channel \sē`krət chan´əl\ *n.* *See* private channel.

sector \sek´tər\ *n.* A portion of the data storage area on a disk. A disk is divided into sides (top and bottom), tracks (rings on each surface), and sectors (sections of each ring). Sectors are the smallest physical storage units on a disk and are of fixed size; typically, they are capable of holding 512 bytes of information apiece. See the illustration.

sector interleave \sek´tər in`tər-lēv\ *n.* *See* interleave.

sector map \sek´tər map`\ *n.* **1.** A map that indicates the unusable sectors on a disk. **2.** A table used to translate the sector numbers that are requested by the operating system into physical
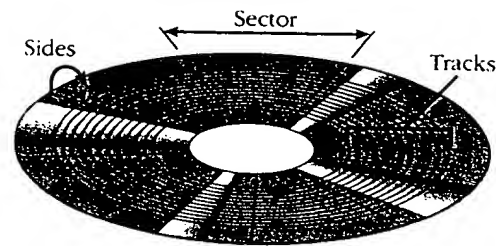
Sector.

sector numbers. The sector map represents a different method of performing sector interleaving. When a sector map is used, the sectors are formatted on the disk in sequential order. The mapping enables the system to read sectors in a nonsequential order. For example, using a 3-to-1 sector interleaving map, a system request for sectors 1 through 4 will result in the disk driver reading physical sectors 1, 4, 7, and 10. *See also* interleave.

secure channel \se-kyər` chan´əl\ *n.* A communications link that has been protected against unauthorized access, operation, or use by means of isolation from the public network, encryption, or other forms of control. *See also* encryption.

Secure Electronics Transactions protocol \sə-kyər` ə-lek-tron´iks tranz-ak`shənz prō`tə-kol\ *n.* Protocol for conducting secure transactions on the Internet, the result of a joint effort by GTE, IBM, MasterCard, Microsoft, Netscape, SAIC, Terisa Systems, VeriSign, and Visa. *Acronym:* SET (S`E-T´).

Secure Hash Algorithm \sə-kyər` hash` al´gə-ridh`əm, se-kyo͞or`\ *n.* *See* SHA.

Secure HTTP \se-kyər` H`T-T-P´\ *n.* *See* S-HTTP.

Secure Hypertext Transfer Protocol \se-kyər` hī`pər-tekst trans´fər pro`tə-kol\ *n.* *See* S-HTTP.

Secure/Multipurpose Internet Mail Extensions \se-kyər` mul`tē-pur-pəs in`tər-net māl´ eks-ten`shənz, mul`tī-pur-pəs\ *n.* *See* S/MIME.

secure site \sə-kyər` sīt`\ *n.* A Web site having the capability of providing secure transactions, ensuring that credit card numbers and other personal information will not be accessible to unauthorized parties.

Secure Sockets Layer \se-kyər` sok´əts lā`ər, lâr`\ *n.* A proposed open standard developed by Netscape Communications for establishing a secure

ABC
Serifs

ABC

Serif. A serif typeface (top) and a sans serif type-face (bottom).

serif[2] \sâr´if\ ·n. Any of the short lines or orna-ments at the ends of the strokes that form a type-face character.

server \sər´vər\ n. **1.** On a local area network (LAN), a computer running administrative soft-ware that controls access to the network and its resources, such as printers and disk drives, and provides resources to computers functioning as workstations on the network. **2.** On the Internet or other network, a computer or program that responds to commands from a client. For example, a file server may contain an archive of data or pro-gram files; when a client submits a request for a file, the server transfers a copy of the file to the cli-ent. *See also* client/server architecture. *Compare* client (definition 3).

server-based application \sər´vər-bāsd a-plə-kā´-shən\ n. A program that is shared over a network. The program is stored on the network server and can be used at more than one client machine at a time.

server cluster \sər´vər klu´stər\ n. A group of independent computers that work together as a single system. A server cluster presents the ap-pearance of a single server to a client.

server error \sər´vər âr´ər\ n. A failure to com-plete a request for information through HTTP that results from an error at the server rather than an error by the client or the user. Server errors are indicated by HTTP status codes beginning with 5. *See also* HTTP, HTTP status codes.

server push-pull \sər´vər pŏŏsh´pul´, pŏŏl´\ n. A combination of Web client/server techniques indi-vidually called "server push" and "client pull." In server push, the server loads data to the client, but

the data connection stays open. This allows the server to continue sending data to the browser as necessary. In client pull, the server loads data to the client, but the data connection does not stay open. The server sends an HTML directive to the browser telling it to reopen the connection after a certain interval to get more data or possibly to open a new URL. See the illustration. *See also* HTML, server (definition 2), URL.

Server push   Client pull
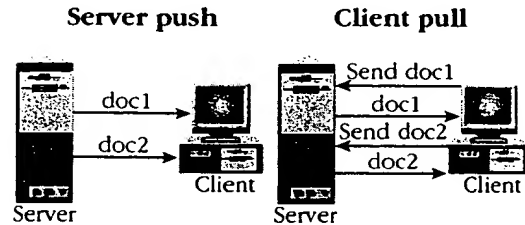
Server push-pull.

server-side includes \sər´vər-sīd in-klōŏdz´\ n. A mechanism for including dynamic text in World Wide Web documents. Server-side includes are special command codes that are recognized and interpreted by the server; their output is placed in the document body before the document is sent to the browser. Server-side includes can be used, for example, to include the date/time stamp in the text of the file. *See also* server (definition 2).

service \sər´vəs\ n. **1.** A customer-based or user-oriented function, such as technical support or network provision. **2.** In reference to program-ming and software, a program or routine that pro-vides support to other programs, particularly at a low (close to the hardware) level. *See also* utility.

Service Advertising Protocol \sər´vəs ad´vər-tī-zēng prō´tə-kol\ n. A method used by a service-providing node in a network (such as a file server or application server) to notify other nodes on the network that it is available for access. When a server boots, it uses the protocol to advertise its service; when the same server goes offline, it uses the protocol to announce that it is no longer avail-able. *Acronym:* SAP (S´A-P´). *See also* server (defi-nition 1).

service bureau \sər´vis byər´ō\ n. **1.** A company that provides various services related to publish-ing, such as prepress production, desktop pub-

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lishing, typesetting, imagesetting, and optical scanning of graphics. **2.** An organization that provides data processing services and access to software packages for a fee.

service provider \sər´vəs prə-vī`dər\ *n. See* ISP.

servo \sər´vō\ *n.* The part of a servomechanism, controlled by the servomechanism's feedback circuit, that produces the final mechanical output. *Also called* servomotor. *See also* servomechanism.

servomechanism \sər´vō-mek`ə-niz-əm\ *n.* A control system in which the final output is mechanical movement. A servomechanism uses feedback to control the position, velocity, or acceleration of a mechanical component. *Also called* servo system.

servomotor \sər´vō-mō`tər\ *n. See* servo.

servo system \sər´vō si`stəm\ *n. See* servomechanism.

session \sesh´ən\ *n.* **1.** The time during which a program is running. In most interactive programs, a session is the time during which the program accepts input and processes information. **2.** In communications, the time during which two computers maintain a connection. **3.** A specific protocol layer in the ISO/OSI networking model that manages communication between remote users or processes. *See also* ISO/OSI model, session layer.

session layer \sesh´ən lār`, lā`ər\ *n.* The fifth of seven layers in the ISO/OSI networking model. The session layer handles the details that must be agreed on by the two communicating devices. *See also* ISO/OSI model.

set[1] \set\ *n.* In printing and display, a group of related characters, such as a character set. *See also* character set.

set[2] \set\ *vb.* **1.** To change the value of a bit to 1. **2.** To establish a particular condition, such as setting tab stops, setting a counter to 0, or setting a breakpoint. *See also* breakpoint.

SET protocol \S`E-T´ pro-tə-kol\ *n. See* Secure Electronics Transactions protocol.

settling time \set`ə-lēng tīm´, set`lēng\ *n.* The time required for a disk drive's read/write head to stabilize over a new location on the disk after being moved.

set-top box \set´top boks`\ *n.* A device that converts a cable TV signal to an input signal to the TV set. Set-top boxes can be used to access the World Wide Web.

setup \set´up\ *n.* **1.** A computer along with all its devices. **2.** The procedures involved in preparing a software program or application to operate within a computer.

setup program \set´up prō`gram\ *n.* **1.** A built-in BIOS program for reconfiguring system parameters to accommodate a new disk drive. *See also* BIOS. **2.** *See* installation program.

setup string \set´up strēng`\ *n. See* control code.

setup wizard \set´up wiz`ərd\ *n.* In Microsoft Windows, a structured series of questions and options that leads a user through the process of installing a new program. See the illustration.
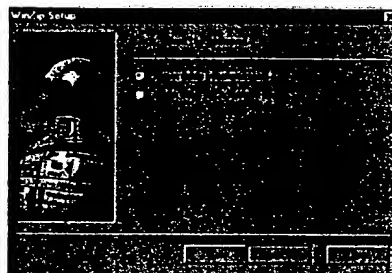
Setup wizard.

seven-segment display \sev`ən-seg`mənt dis-plā´\ *n.* A light-emitting diode (LED) display or liquid crystal display (LCD) that can show any of the 10 decimal digits. The seven segments are the seven bars that form a numeral 8 as in a calculator display.

sex changer \seks´ chān`jər\ *n. See* gender changer.

.sf.ca.us \dot-S-F`dot-C-A`dot-U-S´\ *n.* On the Internet, the major geographic domain specifying that an address is located in San Francisco, California, United States.

sfil \S´fīl\ *n.* The file type of a Macintosh System 7 sound file.

.sg \dot`S-G´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Singapore.

.sgm \dot`S-G-M´\ *n.* The MS-DOS/Windows 3.*x* file extension that identifies files encoded in Standard Generalized Markup Language (SGML). Because MS-DOS and Windows 3.*x* cannot recognize file extensions longer than three letters, the .sgml extension is truncated to three letters in those environments. *See also* SGML.

stateful handling of messages takes account of their content. *Compare* stateless.

stateless \stāt´ləs\ *adj.* Of or pertaining to a system or process that participates in an activity without monitoring all details of its state. For example, stateless handling of messages might take account of only their sources and destinations but not their content. *Compare* stateful.

statement \stāt´mənt\ *n.* The smallest executable entity within a programming language.

state-of-the-art \stāt´əv-dhē-ärt´\ *adj.* Up to date; at the forefront of current hardware or software technology.

.state.us \dot-stāt´dot-U-S´\ *n.* On the Internet, the major geographic domain specifying that an address belongs to a state government in the United States.

static[1] \stat´ik\ *adj.* In information processing, fixed or predetermined. For example, a static memory buffer remains invariant in size throughout program execution. The opposite condition is *dynamic,* or ever-changing.

static[2] \stat´ik\ *n.* In communications, a crackling noise caused by electrical interference with a transmitted signal. *See also* noise (definition 2).

static allocation \stat´ik al-ə-kā´shən\ *n.* Apportionment of memory that occurs once, usually when the program starts. The memory remains allocated during the program's execution and is not deallocated until the program is finished. *See also* allocate, deallocate. *Compare* dynamic allocation.

static binding \stat´ik bīn´dēng\ *n.* Binding (converting symbolic addresses in the program to storage-related addresses) that occurs during program compilation or linkage. *Also called* early binding. *Compare* dynamic binding.

static electricity \stat´ik ə-lek-tris´ə-tē, ē-lek-tris´ə-tē\ *n.* An electrical charge accumulated in an object. Although generally harmless to humans, the discharge of static electricity through an electronic circuit can cause severe damage to the circuit.

static RAM \stat´ik ram´, R-A-M´\ *n.* A form of semiconductor memory (RAM) based on the logic circuit known as a flip-flop, which retains information as long as there is enough power to run the device. Static RAMs are usually reserved for use in caches. *Acronym:* SRAM (S´ram, S`R-A-M´). *See also* cache, RAM. *Compare* dynamic RAM.

stationery[1] \stā´shə-nâr`ē\ *adj.* Describing a type of document that, when opened by the user, is duplicated by the system; the copy is opened for the user's modification while the original document remains intact. Stationery documents can be used as document templates or boilerplates. *See also* boilerplate, template (definition 5).

stationery[2] \stā´shə-nâr`ē\ *n.* A stationery document. *See also* stationery[1].

statistical multiplexer \stə-tis`tə-kəl mul´ti-pleks-ər\ *n.* A multiplexing device that adds "intelligence" to time-division multiplexing by using buffering (temporary storage) and a microprocessor to combine transmission streams into a single signal and to allocate available bandwidth dynamically. *Also called* stat mux. *See also* dynamic allocation, multiplexing, time-division multiplexing.

statistics \stə-ti´stiks\ *n.* The branch of mathematics that deals with the relationships among groups of measurements and with the relevance of similarities and differences in those relationships. *See also* binomial distribution, Monte Carlo method, probability, regression analysis, standard deviation, stochastic.

stat mux \stat´muks\ *n. See* statistical multiplexer.

status \stat´us, stā´tus\ *n.* The condition at a particular time of any of numerous elements of computing—a device, a communications channel, a network station, a program, a bit, or other element—used to report on or to control computer operations.

status bar \stat´us bär`, stā´tus\ *n.* In Microsoft Windows, a space at the bottom of many program windows that contains a short text message about the current condition of the program. Some programs also display an explanation of the currently selected menu command in the status bar. See the illustration.

Status bar.

status codes \stat´us kōdz`, stā´tus\ *n.* Strings of digits or other characters that indicate the success or failure of some attempted action. Status codes were commonly used to report the results of early computer programs, but most software today uses words or graphics. Internet users, especially those

tag \tag\ *n*. **1.** In programming, one or more characters containing information about a file, record type, or other structure. **2.** In certain types of data files, a key or an address that identifies a record and its storage location in another file. *See also* tag sort. **3.** In markup languages such as SGML and HTML, a code that identifies an element in a document, such as a heading or a paragraph, for the purposes of formatting, indexing, and linking information in the document. In both SGML and HTML, a tag is generally a pair of angle brackets that contain one or more letters and numbers. Usually one pair of angle brackets is placed before an element, and another pair is placed after, to indicate where the element begins and ends. For example, in HTML, <IT>hello world</IT> indicates that the phrase "hello world" should be italicized. *See also* <>, element, emotag, HTML, SGML.

Tagged Image File Format \tagd` im´əj fīl´ fŏr´-mat\ *n*. *See* TIFF.

tag sort \tag´ sŏrt\ *n*. A sort performed on one or several key fields for the purpose of establishing the order of their associated records. *Also called* key sort.

tag switching \tag´ swich`ēng\ *n*. A multilayer Internet switching technology developed by Cisco Systems that integrates routing and switching.

talk[1] \täk\ *n*. The UNIX command that, when followed by another user's name and address, is used to generate a request for a synchronous chat session on the Internet. *See also* chat[1] (definition 1).

talk[2] \täk\ *vb*. See chat[2].

talker \tä´kər\ *n*. An Internet-based synchronous communication mechanism most commonly used to support multiuser chat functions. Such systems typically provide specific commands for movement through separate *rooms*, or chat areas, and allow users to communicate with other users in real time through text messages, indicate simple gestures, use a bulletin board system (BBS) for posting comments, and send internal e-mail. *See also* BBS (definition 1), chat[1] (definition 1).

talk. newsgroups \täk`dot nōōz´grōōps\ *n*. Usenet newsgroups that are part of the talk. hierarchy and have the prefix talk. as part of their names. These newsgroups are devoted to debate and discussion of controversial topics. Talk. newsgroups are one of the seven original Usenet newsgroup

hierarchies. The other six are comp. misc., news., rec., sci., and soc. *See also* newsgroup, traditional newsgroup hierarchy, Usenet.

tandem processors \tan´dəm   pros´əs-ərz\   *n*. Multiple processors wired so that the failure of one processor transfers central processing unit (CPU) operation to another processor. Using tandem processors is part of the strategy for implementing fault-tolerant computer systems. *See also* central processing unit.

TANSTAAFL \tan´staf l,   T-A-N-S-T-A-A-F-L´\   *n*. Acronym for "There ain't no such thing as a free lunch." An expression used on the Internet in e-mail, chat sessions, mailing lists, newsgroups, and other online forums. *See also* chat[1] (definition 1), e-mail[1] (definition 1), mailing list, newsgroup.

tap \tap\ *n*. A device that can be attached to an Ethernet bus to enable a computer to be connected.

tape \tāp\ *n*. **1.** A thin strip of polyester film coated with magnetic material that permits the recording of data. Because tape is a continuous length of data storage material and because the read/write head cannot "jump" to a desired point on the tape without the tape first being advanced to that point, tape must be read or written sequentially, not randomly (as can be done on a floppy disk or a hard disk). **2.** A storage medium consisting of a thin strip of paper used to store information in the form of sequences of punched holes, chemical impregnation, or magnetic ink imprinting.

tape cartridge \tāp´ kär`trij\ *n*. A module that resembles an audio cassette and contains magnetic tape that can be written on and read from by a tape drive. Tape cartridges are primarily used to back up hard disks. See the illustration. *See also* tape (definition 1).

Tape cartridge.

tape drive \tāp´ drīv\ *n*. A device for reading and writing tapes. *See also* tape (definition 1).

graphic image: See the illustration. **3.** In an environment with multiple windows, to rearrange and resize all open windows so that they appear fully on the screen without any overlap.
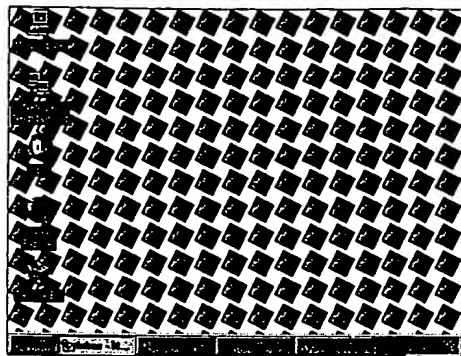
Tile.

time and date \tīm` ənd dāt´\ *n.* In computing, the timekeeping and datekeeping functions maintained by the computer's operating system, used most visibly as a means of "stamping" files with the date and time of creation or last revision.

time-division multiplexing \tīm`də-vizh-ən mul´ti-pleks-ēng\ *n.* A form of multiplexing in which transmission time is broken into segments, each of which carries one element of one signal. *See also* statistical multiplexer. *Compare* FDM.

time out or **timeout** or **time-out** \tīm out´\ *n.* An event that indicates that a predetermined amount of time has elapsed without some other expected event taking place. The time-out event is used to interrupt the process that had been waiting for the other expected event. For example, a dial-up remote system might allow the user 60 seconds to log in after making a connection. If the user fails to enter a valid login name and password within this time, the computer breaks the connection, thus protecting itself against crackers as well as freeing a phone line that may have gone dead.

timer \tī´mər\ *n.* A register (high-speed memory circuit) or a special circuit, chip, or software routine used to measure time intervals. A timer is not the same as the system clock, although its pulses can be derived from the system clock frequency. *See also* time and date. *Compare* clock (definition 1), clock/calendar.

time-sharing \tīm´shâr`ēng\ *n.* The use of a computer system by more than one individual at the same time. Time-sharing runs separate programs concurrently by interleaving portions of processing time allotted to each program (user). *See also* quantum (definition 2), time slice.

time slice \tīm´ slīs\ *n.* A brief period of time during which a particular task is given control of the microprocessor in a time-sharing multitasking environment. *See also* multitasking, preemptive multitasking. *Compare* quantum (definition 2).

time-slice multitasking \tīm`slīs mul´tē-ta-skēng, mul´tī-ta-skēng\ *n. See* preemptive multitasking.

Time to Live \tīm` tōo liv´\ *n.* A header field for a packet sent over the Internet indicating how long the packet should be held. *Acronym:* TTL (T`T-L´). *See also* header (definition 2), packet (definition 1).

timing signals \tī´mēng sig`nəlz\ *n.* **1.** Any of several types of signals used to coordinate activities within a computer system. **2.** A signal used to coordinate data transfer operations.

tiny model \tī´nē mod`əl\ *n.* A memory model in the Intel 80x86 processor family. The tiny model allows a combined total of only 64 kilobytes (KB) for code and for data. *See also* 8086, memory model.

title bar \tī´tl bär´\ *n.* In a graphical user interface, a horizontal space at the top of a window that contains the name of the window. Most title bars also contain boxes or buttons for closing and resizing the window. Clicking on the title bar allows the user to move the entire window.

.tj \dot`T-J´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Tajikistan.

.tk \dot`T-K´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Tokelau.

TLA \T`L-A´\ *n.* Acronym for three-letter acronym. An ironic term, usually used in jest on the Internet in e-mail, newsgroups, and other online forums, referring to the large number of acronyms in computer terminology, particularly those consisting of three letters.

.tm \dot`T-M´\ *n.* On the Internet, the major geographic domain specifying that an address is located in Turkmenistan.

TMS34010 \T-M-S`thrē`-fôr-ō`wən-ō´\ *n.* See 34010, 34020.

.wav \dot`W-A-V´\ *n.* The file extension that identifies sound files stored in waveform (WAV) audio format. *See also* WAV.

WAV \wāv, W`A-V´\ *n.* A file format in which Windows stores sounds as waveforms. Such files have the extension .wav. Depending on the sampling frequency, on whether the sound is monaural or stereo, and on whether 8 or 16 bits are used for each sample, one minute of sound can occupy as little as 644 kilobytes or as much as 27 megabytes of storage. *See also* sampling (definition 2), waveform.

wave \wāv\ *n.* **1.** Any disturbance or change that has an oscillatory, periodic nature, for example, a light or sound wave. *See also* waveform. **2.** In electronics, the time-amplitude profile of an electrical signal.

waveform \wāv´fōrm\ *n.* The manner in which a wave's amplitude changes over time. *See also* period, phase, wavelength.

wavelength \wāv´lenkth, wāv´length\ *n.* The distance between successive peaks or troughs in a periodic signal that is propagated through space. Wavelength is symbolized by the Greek letter lambda (λ) and can be calculated as speed divided by frequency.

wavelet \wāv´lət\ *n.* A mathematical function that varies over a limited extent of time. Wavelets are coming into increasing use for analyzing signals (such as sound). They have limited duration and sudden changes in frequency and amplitude rather than the infinite duration and constant amplitude and frequency of the sine and cosine functions. *Compare* Fourier transform.

WBEM \W`B-E-M´\ *n.* Acronym for **Web-Based Enterprise Management.** A protocol that links a Web browser directly to a device or application that monitors a network. *See also* communications protocol.

WDEF \W`D-E-F´\ *n. See* window definition function.

WDL \W`D-L´\ *n. See* Windows Driver Library.

weak typing \wēk` tī´pēng\ *n.* A characteristic of a programming language that allows the program to change the data type of a variable during program execution. *See also* data type, variable. *Compare* strong typing.

web \web\ *n.* A set of interlinked documents in a hypertext system. The user enters the web through a home page. *See also* World Wide Web.

Web \web\ *n. See* World Wide Web.

Web address \web´ a`dres, ə-dres´\ *n. See* URL.

Web-Based Enterprise Management \web`bāsd en`tər-prīz man´əj-mənt\ *n. See* WBEM.

Web browser \web´ brou`zər\ *n.* A client application that enables a user to view HTML documents on the World Wide Web, another network, or the user's computer; follow the hyperlinks among them; and transfer files. Text-based Web browsers, such as Lynx, can serve users with shell accounts but show only the text elements of an HTML document; most Web browsers, however, require a connection that can handle IP packets but will also display graphics that are in the document, play audio and video files, and execute small programs, such as Java applets or ActiveX controls, that can be embedded in HTML documents. Some Web browsers require helper applications or plug-ins to accomplish one or more of these tasks. In addition, most current Web browsers permit users to send and receive e-mail and to read and respond to newsgroups. *Also called* browser. *See also* ActiveX controls, helper application, hyperlink, Internet Explorer, Java applet, Lynx, Mosaic, Netscape Navigator, plug-in.

WebCrawler \web`krä`lər, krô`lər\ *n.* A World Wide Web search engine operated by America Online. *See also* search engine.

Web development \web´ de-vel`əp-mənt\ *n.* The design and coding of World Wide Web pages.

Web directory \web´ dər-ek`tər-ē\ *n.* A list of Web sites, giving the URL and a description of each. *See also* URL.

Web index \web´ in`deks\ *n.* A Web site intended to enable a user to locate other resources on the Web. The Web index may include a search facility or may merely contain individual hyperlinks to the resources indexed.

Webmaster or **webmaster** \web´ma`stər\ *n.* A person responsible for creating and maintaining a World Wide Web site. A Webmaster is often responsible for responding to e-mail, ensuring the site is operating properly, creating and updating Web pages, and maintaining the overall structure

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